

**Kurtuncu et al., Afr J Tradit Complement Altern Med. (2016) 13(3):66-74**<http://dx.doi.org/10.4314/ajtcam.v13i3.9>**THE USE OF COMPLEMENTARY AND ALTERNATIVE THERAPIES IN CHILDHOOD CANCER: A QUESTIONNAIRE BASED ON A DESCRIPTIVE SURVEY FROM THE WESTERN BLACK SEA REGION OF TURKEY**<sup>1</sup>Meltem Kurtuncu, <sup>2</sup>Hicran Yildiz, <sup>3</sup>Latife Utas Akhan<sup>1</sup>Bülent Ecevit University, Zonguldak School of Nursing, Department of Pediatric Nursing, Zonguldak/Turkey., <sup>2</sup>Uludag University, Health Science Faculty, Division of Nursing, Bursa/Turkey<sup>3</sup>Bülent Ecevit University, Zonguldak School of Nursing, Department of Psychiatry Nursing, Zonguldak/Turkey.**Corresponding Authors Email:** [meltemkurtuncu@yahoo.com](mailto:meltemkurtuncu@yahoo.com), [hicran\\_yildiz@yahoo.com](mailto:hicran_yildiz@yahoo.com), [latifeutasakhan@hotmail.com](mailto:latifeutasakhan@hotmail.com)**Abstract**

**Background:** The objective of this study was to determine what complementary and alternative therapies are used in cases of childhood cancer, the frequency of their use and the factors that affect the tendency to resort to these therapies.

**Materials and Methods:** The study, of cross-sectional design, was conducted with the parents of 101 children diagnosed with cancer, using a questionnaire and the technique of face-to-face interviews. Mean scores, percentages, chi-square and Kruskal-Wallis tests were used in the statistical analysis. During the study, interviews were held with 42.6% of the children's mothers and with the fathers of 44.6%.

**Results:** The mean age of the children was  $8.66 \pm 4.52$  years. A group of 33.7% of the parents was making use of complementary and alternative medicine (CAM) for their children. Of the parents, 76.5% stated that CAM had been instrumental in reducing a tumor, 53.8% said that their child's general condition had improved and 15.4% expressed an increase in morale. Another 41.2% concealed their use of CAM from their doctors and nurses. The parents that were interviewed: the age of the mother, the age of the father and the family's economic status were determining factors in the parents' use of CAM. The prevalence of the use of CAM among parents with children with cancer is not negligible.

**Conclusion:** It is the researchers' belief that health professionals must be informed about the use of CAM and its methods and that the patients should be evaluated with an impartial approach and given information about the use of CAM, together with conventional treatment.

**Key words:** CAM, Parents, Cancer, Children

**Introduction**

In the last 10 years, complementary and alternative medicine (CAM) has been used in the management of chronic diseases such as cancer, diabetes, cardiovascular disease and palsy (Mao et al., 2011; Broom et al., 2010; Ogbera et al., 2010; Khalaf and Whitford, 2010; Decker et al., 2007; Yeh et al., 2006; Shin et al., 2008; Barnes et al., 2008). Despite all the recent developments in pharmacological therapies, the use of CAM is surprisingly increasing in the general population (Metcalf et al., 2010; Kav, Hanoğlu, Algier, 2008). CAM use in Turkey has been the subject of only few studies. In these studies, the percentage of CAM use varies between 33% and 52% (Orhan et al., 2003; Kav et al., 2008). The use of CAM in children, however, varies between 9% and 73%. In the United States, 46%–84% of children with cancer make use of CAM (Gagnon & Recklist, 2003). The highest international rates (66–73%) are reported in Taiwan (Yeh et al., 2006), Mexico (Gomez-Martinez, Tlacuilo-Parra, Garibaldi-Covarrubias, 2007) and Singapore (Lim et al., 2005), with slightly lower rates (36–49%) in Canada (Martel et al., 2005). The use of CAM among child cancer patients in Turkey has been found in different studies to be 51.6% (Karadeniz et al., 2007), 48.9% (Gözüm, Arıkan, Buyukavcı, 2007) and 77% (Genç et al., 2009).

It is reported that parents of children with cancer generally turn to CAM when their child's prognosis worsens (Fletcher & Clarke, 2004). Studies show that parents use CAM for their children to support ongoing treatment, improve quality of life, reduce the side effects of drugs, strengthen the immune system, cause a remission of the sickness and initiate a potential cure to prevent the cancer from developing again, and also to reduce pain, provide physical and psychological support and regulate sleep (Shenfield, Lim, Allen, 2002; Hurvitz et al., 2003). Children use many different types of therapies, and among these, prayer and spiritual practices, mind–body relaxation interventions, massage and herbal therapies are the most commonly reported (Straus & Chesney, 2006). Prayer, meditation, yoga and other mind–body techniques rely on the belief that patients can influence the course of their illness through mental or emotional activities. While some herbal remedies offer relief for patients, others bring on severe side effects such as renal failure, hypertension, convulsion and liver failure (Jankovic et al., 2004; Kelly, 2004).

The demand for complementary and alternative therapies is steadily increasing and the area is evolving into a global market. The rising need is being met with persons who do not have the adequate training. The use of CAM causes an ethical dilemma when the desire of parents to make use of it for their children conflicts with the value judgments of health professionals. Health professionals should communicate with parents and inquire about their use of CAM, explaining to them the advantages and disadvantages (Khorshid & Yapucu 2005). This study carries significance in that it brings to the fore once again the various functions of health professionals in terms of providing information and managing healthcare as well as playing supportive and preventive roles in determining the percentages of patients with childhood cancers that are using different types of complementary and alternative therapies. At the same time, the study also fills a gap in the literature since, despite the fact that there is research on

the use of CAM in children with cancer in different geographical regions of Turkey (Genç et al., 2009; Gözüml et al., 2007, Karadeniz et al., 2007), no study has been encountered that has treated the use of CAM in children with cancer in the Black Sea province of Zonguldak. The objective of this study is to determine what complementary and alternative therapies are used in cases of childhood cancer in a province in the Western Black Sea Region of Turkey, and to find the prevalence of use and the factors that affect the tendency to resort to these therapies.

## **Method**

### **Setting**

The cross-sectional survey study was performed with the parents of 101 children diagnosed with cancer presenting at the Children's Oncology Department of a university hospital in the Western Black Sea Region. The survey was taken using the face-to-face interview technique over the period December 2013-April 2014. Thirty-eight of the parents with children registered at the clinic did not consent to participating in the study.

### **Sample and Sampling Procedures**

The research was carried out in the children's oncology clinic of a university hospital with the parents of 101 of the 139 registered at the clinic (72.66%). The study set out to determine the factors that influenced the voluntary tendency to resort to complementary and alternative therapies in parents with no psychiatric disorder or communication problems and who had children that had been diagnosed with cancer at least one year prior to the start of the research.

### **Data Collection Tools**

The semi-structured questionnaire was developed specifically for this study based on the guidance provided by questionnaires from previously published studies (Gözüml et al., 2007; Ogbera et al., 2010; Khalaf and Whitford, 2010). The form was filled out by the researchers in face-to-face interviews with the parents and each interview was completed in 15-20 minutes. The data collection form consisted of two parts. In the first part, sociodemographic and illness-related characteristics of the family (age, sex, diagnosis, educational status, residence, economical status, period of illness) were queried. In the second part, the purpose of CAM use, the persons who had recommended these methods, whether or not the children reported using these methods to health professionals, whether they continued or discontinued their pharmacological treatment while using these methods, and the benefits and harms of these methods were questioned as well. The parents were then asked if they had ever used or were using any of the following 12 CAM therapies: acupuncture, aromatherapy, herbal medicine, nutritional supplements, exercise, relaxation therapies (including relaxation hypnosis, meditation, yoga, and biofeedback), imagery, massage therapy, prayer, homeopathy or other CAMs mentioned by the participants. Classification of the CAM categories was based on the CAM classification of the National Center for Complementary and Alternative Medicine. Open-ended questions were used, and answers were categorized.

### **Ethical Considerations**

Permission for the research was obtained from the Ethics Committee of the Medical Faculty of Bülent Ecevit University prior to the study (Reg. No: 2013-126-17/12). Also, written permission to perform the study was obtained from the rectorship of the university. The aim, plan, and benefits of the study were explained to the parents, after which they were given an informed consent form. The parents who accepted to participate in the study in light of the information provided signed the consent form.

### **Data Analysis**

The statistical analyses were performed using SPSS for Windows version 18.0. Descriptive statistics were calculated for all variables. The study participants were categorized as either CAM users or nonusers. Comparisons between the groups were assessed using Chi-square, Kruskal Wallis and Tukey HSD.

## **Results**

### **Sample Characteristics**

Interviews were held with the mothers of 42.6% of the children in the study and with 44.6% of the fathers. The children's mean age was  $8.66 \pm 4.52$  – 50.5% were boys, 43.6% were not in school, 54.5% were students and the average number of siblings was  $1.57 \pm 1.31$ . A group of 49.5% of the children's mothers and 55.4% of the fathers were high school graduates; 75.2% of the mothers were housewives and 49.5% of the fathers were laborers. The economic status of the families of 79.2% of the cases was average and 66.3% lived in the district. Of the parents, 33.7% made use of CAM, 63.4% did not, and 3% did not wish to talk on the subject. CAM usage was found to show significant differences in terms of the parents' descriptive characteristics, namely, the parent with whom the interview was held, the mother's age, the father's age, and the family's economic status ( $p < 0.05$ ) (see Table 1). It was found that CAM use was more frequent than expected in those of an average economic status only in the interviews held with the mothers and with the parents together. The advanced analyses showed that CAM use was more prominent among older parents.

**Table 1:** Distribution of Characteristics and Attitude related to the Illness and the Treatment (n=101)

Characteristics and Attitude related to the Illness and the Treatment		n	%
Type of cancer	ALL	36	35,6
	AML	17	16,8
	multiple myeloma	3	3,0
	non-Hodgkin lymphoma	3	3,0
	Hodgkin lymphoma	7	6,9
	osteosarcoma	5	5,0
	wilms' tumor	2	2,0
	papillary thyroid ca	2	2,0
	ovarian ca	2	2,0
	other ca types	24	23,8
Is there anyone in your family with cancer?	yes	34	33,7
	no	67	66,3
Is there anyone in your immediate circle with cancer?	yes	20	19,8
	no	81	80,2
Where did you get your information about the illness?*	Families of patients	17	16,8
	Doctor	97	96,0
	Another medical center	8	7,9
	Internet	12	11,9
	Newspapers/books	3	3,0
	TV/radio	5	5,0
Have you gone to any other doctor or healthcare center?*	Primary healthcare facility (community health center, dispensary, etc.)	10	9,9
	Secondary healthcare facility (State hospital, children's hospital)	39	38,6
	University Hospital	62	61,4
	Private doctor or hospital	5,0	5,0
	Haven't gone	6	5,9
How were you referred to the healthcare center where your child is being treated?	Hospital referral	40	39,6
	Recommendation	18	17,8
	Another center	34	33,7
	Other	9	8,9
Are you thinking of going to another healthcare center?	Yes	16	15,8
	No	67	66,3
	I'm undecided	17	16,8
	I have no idea	1	1,0
What kind of treatment options did your doctor offer your child?*	Chemotherapy	72	71,3
	Radiotherapy	68	67,3
	Surgery	28	27,7
	None of the above	12	11,9
	Don't know	1	1,0
Do you trust medical treatment?	yes	78	77,2
	no	2	2,0
	I'm undecided	20	19,8
	I have no idea	1	1,0
Did you go anywhere else besides a healthcare facility to look for a cure?*	Clergyman	27	26,7
	Shrine	38	37,6
	Healer	19	18,8
	Religious Order	16	15,8
	Bioenergy	6	5,9
	Acupuncture, yoga	4	4,0
	Other	2	2,0

\*More than one choice was marked.

**Table 2:** Sociodemographic Characteristics of Parents who had/did not have Knowledge about CAM (n=101)

Sociodemographic characteristics		Yes	CAM use No	I don't want to answer this	Level of significance
Person interviewed					
	mother	23	20	0	$X^2=27.340$ $p=0.000$
	father	4	38	3	
	parents together	7	4	0	
	legal guardian	0	2	0	
Child's age*	(Mean $\pm$ SD years)	9.61 $\pm$ 5.06	7.87 $\pm$ 3.96	8.66 $\pm$ 5.68	$p=0.274$
Gender	boys	15	34	15	$X^2=1.044$
	girls	19	30	19	$p=0.593$
Child's School Status	Not in school	13	30	1	$X^2=4.374$ $p=0.358$
	Elementary school	13	28	1	
	Middle school	8	6	1	
Child's profession	None	15	30	1	$X^2=0.254$ $p=0.881$
	student	19	34	2	
Number of siblings*	(Mean $\pm$ SD siblings)	2.00 $\pm$ 1.53	1.39 $\pm$ 1.14	0.67 $\pm$ 0.57	$KW=4.743$ $p=0.93$
Mother's Age*	(Mean $\pm$ SD years)	35.79 $\pm$ 5.84	31.81 $\pm$ 6.63	30.33 $\pm$ 10.50	$KW=9.299$ $p=0.010$
Father's Age*	(Mean $\pm$ SD years)	39.26 $\pm$ 6.10	35.55 $\pm$ 6.88	35.33 $\pm$ 7.02	$KW=7.350$ $p=0.025$
Mother's education	elementary School	16	20	1	$X^2=9.720$ $p=0.137$
	middle School	11	37	2	
	high School	3	6	0	
	university	4	1	0	
Father's Education	elementary School	11	6	0	$X^2=11.243$ $p=0.081$
	middle School	14	39	3	
	high School	5	12	0	
	university	4	7	0	
Mother's profession	housewife	25	48	3	$X^2=3.100$ $p=0.541$
	laborer	3	10	0	
	civil servant	6	6	0	
Father's profession	retired	0	1	0	$X^2=3.550$ $p=0.737$
	laborer	17	31	2	
	civil servant	6	18	0	
	self-employed	11	14	1	
Family's economic status	good	7	2	0	$X^2=9.940$ $p=0.041$
	poor	5	7	0	
	average	22	55	3	
Place of residence	province	7	9	0	$X^2=4.099$ $p=0.663$
	district	21	43	3	
	town	2	8	0	
	village	4	4	0	

\*More than one choice was marked.

**CAM Usage Characteristics**

Of the parents, 33.7% were making use of treatment options and cures recommended to them by persons other than their doctors. Of these families, 58.8% were paying for these methods and 70.6% procured the materials needed for the cure from the province they live in. Out of the cases, 70.6% were using prayer, worship, votive offerings, sacrificial offerings and similar methods, 50% were making use of treatment and cures concocted with various items of food or drink. Among these, 26.5% said they resorted to these methods to ease their conscience. Fifty percent said the methods proved beneficial, and 76.5% of this group confided that the method had succeeded in reducing the tumor. Of the cases, 47.1% stated that they had started to make use of the method from the time of the first diagnosis and 52.9% said they used the method regularly. Fifty percent of the cases told their doctors about the complementary or alternative method they were using. Of the cases, 44.6% said they used herbal therapies or a type of cure and 42.2% of these cases specified herbal teas while 37.8% spoke of stinging nettle. Vitamin or supplementary drugs were being used by 17.8% of the cases (see Table 3).

**Table 3:** Comments of the Parents who were using CAM (n=34)

Characteristics		n	%
Have you used treatments or cures (herbal, etc.) recommended by persons other than your doctor?	Yes	34	33,7
	No	64	63,4
	I don't want to answer this	3	3,0
Have you paid money for the methods you've used that were recommended by persons other than your doctor? (n=34)	Yes	20	58,8
	No	6	17,6
	No response	8	23,5
Where do you obtain the materials you use for this treatment or cure? (n=34)	In the province I live in	24	70,6
	In a different region	2	5,9
	No response	8	23,5
Which methods are you using? (n=34)*	Prayer, worship, votive offering, sacrificial offering, etc.	24	70,6
	Lead casting, charms	5	14,7
	Items of food and drink	5	14,7
	Exercises, activities	6	17,6
	Royal jelly	3	8,8
	Pollen	2	5,9
	Acupuncture	6	17,6
	Other		
	I don't see any benefit from the medical treatment	4	11,8
	Pressures from family and friends	4	11,8
	To ease my conscience	9	26,5
Reason for use	Other	12	35,3
	No response	5	14,7
Whether or not benefit was found in the use of CAM	Yes	17	50,0
	No	5	14,7
	Partially	4	11,8
	No response	8	23,5
If you benefited, what improved?	General condition	14	53,8
	Appetite	10	38,5
	Pain	2	7,7
	Reduction of the tumor	26	76,5
	Morale	4	15,4
	Sleep	3	11,5
	Other	3	11,5
Time of starting CAM use	At the first diagnosis	16	47,1
	While in remission	11	32,4
	When there was a relapse	5	14,7
	Other	2	5,9
Frequency of CAM use	Regularly	18	52,9
	Irregularly	13	38,2
	Sometimes	3	8,8
Does your doctor know about your use of CAM?	Yes	17	50,0
	No	14	41,2
	I would not like to tell him	3	8,8
Which plants or herbs have you used? (n=45)	Herbal tea	19	42,2
	Ready mix	14	31,1
	Stinging nettle	17	37,8
	Black sesame	9	20,0
	Broccoli	8	17,8
	Artichoke	11	24,4
	Rosehip	5	11,1
	Aloe Vera	4	8,9
	Cinnamon	5	11,1
	Ginger	13	28,9
	Spices	1	2,2
	Other	10	22,2
Are you using vitamins or any supplementary drugs?	Yes	18	17,8
	No	83	82,2

\*More than one choice was marked.

## Discussion

CAM is widely used in the general population and by persons with chronic diseases in Turkey and around the world. In Turkey, particularly, the interest of cancer patients in the use of CAM is steadily increasing (Barnes et al., 2004; Barnes et al., 2008; Felicity et al., 2010; Nazik et al., 2012; Metcalfe et al., 2010).

In studies conducted in Turkey, the average prevalence of CAM use is 46.2%, varying between 33% and 52% (Kav, 2009). It can be said that this percentage is higher than in other countries (Tascilar et al., 2006). To the authors' knowledge, this is one of the few studies to determine the frequency of CAM therapies used in children with cancer in Turkey. Children with special healthcare needs are frequent users of CAM. The rate of using CAM in this population is estimated to be between 30%–70% (Kemper, Vohra, Walls, 2008). Gözümlü et al. (2007) determined that the prevalence of CAM use is 48.9% in children with cancer, and Post-White et al. (2009) have found CAM use to be higher in children with epilepsy (61.9%), cancer (59%), asthma (50.7%) and sickle cell disease (47.4%) than in general paediatrics (36%). The rate of using CAM in this study was found to be 33.7%. The reason the rate of using CAM was lower in the present study may stem from the fact that the sample group was smaller than in other studies.

In the literature, high rates of CAM use are stated to be associated with socio-demographics such as age, educational level and economic status (Gözümlü et al., 2007; Nazik et al., 2012). Pitteti et al. (2001) found that parents' and children's sociodemographic characteristics did not have an effect on the use of CAM. In other studies in Turkey, a positive correlation has been found between low educational levels and the use of CAM (Karadeniz et al., 2007; Arıkan, Sivrikaya & Olgun, 2008; Öztürk & Karayağız, 2008; Genç et al., 2009, Efe et al., 2013). While a significant difference was not revealed between the parents' educational status and the use of CAM in this study, 36.6% of the mothers participating in the research were found to be elementary school graduates, 49.5% high school graduates; 55.4% of the fathers were high school graduates. The findings of the present study are consistent with the literature. While our study results conform to those of Pitteti et al. (2001), they are not consistent with the findings of other studies. The following may be suggested as reasons for this: the educational level in the regions, the differences in the numbers of the samples, and the heterogeneous distribution of educational status in the study sample.

It was found that 75.2% of the mothers participating in the research were housewives. In a study by Efe et al. (2013), it was reported that 83.6% of the mothers in the research were housewives. Nazik et al. (2012) stated in a study they conducted with gynecological oncology patients that 39% of the patients using CAM methods were housewives. Because of the cultural deficiencies of housewives in Turkey, these women are easily persuaded by their families and friends, their social circles and have the tendency not only to support each other but make recommendations to each other. As a matter of fact, in scientific terms, CAM usage was found to show significant differences in terms of the person with whom the interview was held, the mother's age, the father's age and the family's economic status. The reason why the majority of the mothers, of whom most were housewives, resorted to the use of CAM under the influence and advice of their social circle without looking into side effects or other consequences may be because they only shared the information about CAM with their spouses. The reason the differences in economic status stemmed from the persons of middle-class standing may possibly be that the numbers of people in this group were much higher than in the groups of good or poor economic status. In addition, the reason CAM use was higher in older mothers and fathers may be because these parents believed themselves to be more capable of being careful with using CAM methods.

It has been reported that the most frequently encountered type of method used in Turkey is plant mixtures and in the plant category, the most commonly used plant is "stinging nettle" (Kav et al., 2008; Efe et al., 2013). In their study, Mahomoodally and Roumysa (2013) have reported that ethnicity is an important indicator of the type of herbal treatment that will be used by individuals resorting to alternative medicine. Nazik et al. (2012) indicate in their study of gynecological oncology patients that stinging nettle is used at a rate of 37.8% and is therefore the most commonly used supportive food for this purpose. In the present study, it was found that families most commonly used the support provided by herbal tea (42.2%) and that the rate of using stinging nettle was 37.8%. Stinging nettle is a plant that grows profusely in the Black Sea region (Ayan & Çalışkan, 2006). The plant is easy to find and therefore cheap, and it is most likely to be the herbal remedy most commonly preferred because of this. This thought is supported by the fact that when the subjects were asked where they found the substance they were using, 70.6% said, "In the province I live in."

Religious and spiritual practices continue to have an important place in people's lives. Matters of faith and issues of human spirituality are within the realm of religion. A religion is a means of expressing and developing our inner spiritual essence. If, in this context, medicine is considered the art of healing and to provide care for the human being as a whole, human spirituality becomes inevitably a matter of medical interest. In fact, studies have pointed to obvious relationships between spirituality, religious practices, and a wide range of medical outcomes. Spirituality should be explored and examined, especially in the case of a child with a life-threatening or terminal illness (Kane et al., 2000). The results of various studies show that as the course of a disease worsens and the period of confinement lengthens, the spiritual needs of individuals grow, especially in the case of children with terminal illnesses such as cancer, the spiritual dimension involved in problem solving and coping is essential for both children and their families (Kostak & Akan, 2011). In this study, it was found that 70.6% of the parents devoted themselves to prayer, worship, votive offerings, sacrificial offerings and other religious practices. There is a widespread belief throughout the world that prayer is effective in bringing about improvements in illness (Benson et al., 2006; Heybeli, 2008). In studies conducted in Turkey, it appears that among the complementary medical methods most commonly used, prayer and other religious practices are the second most preferred (Kav et al., 2008). Efe et al. (2013) have stated in their study on children with thalassemia that 61.8% of parents have leaned toward spiritual practices and prayer. Nazik et al. (2012) in their study of gynecological oncology patients, found that prayer was the second most common method of CAM used, at a rate of 41.5%. Prayer can be a healing therapy in any spiritual persuasion (Post-White et al., 2009). Turkey is a predominantly Muslim nation where prayer is a common practice. Prayer as therapy has been studied widely, but findings are often contradictory. This supports the results of the present research.

Some studies reveal that at least 50% of parents hide from their pediatricians or nurses the fact that they are using CAM in their children's care (Pitteti et al., 2001; Lim et al., 2005). In a study by Mahomoodally and Roumysa (2013), it was observed that 61.7% patients did not inform their doctors about their use of herbal remedies. In their research, Nazik et al. (2012) reported that only 2.4% of patients obtained information about CAM practices from their doctors and/or nurses. Efe et al. (2013), state that 43.3% of parents hid their use of CAM from their children's doctors. In our study, it was observed that 41.2% of the parents were hiding their use of CAM from doctors and nurses. This finding is consistent with the literature. The reason patients and their families



conceal their use of CAM is thought to be because of their fear of negative feedback from doctors and nurses and/or their refusal to trust such methods. Healthcare professionals should establish an open dialogue that will lead to a clear distinction between harmful and possibly helpful CAM therapies (Jankovic et al., 2004). In a review of a decade of survey research on CAM use in childhood cancer, Myers et al. (2005) concluded that most physicians are unaware of the CAM therapies that children experience. In another study conducted with oncology physicians, it was found that half of the doctors who were informed of the complementary therapies their patients were experiencing were supportive of these practices (massages, journal writing, support groups, acupuncture, biofeedback and art therapy (Roberts et al., 2005).

Researchers confirm the positive effects of CAM practices on quality of life and feelings of hope (Gross et al., 2013). In research by Ezeoma and Anarado (2008) on cancer patients, it was stated that 67.3% CAM users did not notice any benefit from the therapy. In the present study, however, half of the users expressed acknowledgment of the benefits of CAM methods. In the study of Ezeoma and Anarado (2008) with cancer patients, it was reported that CAM users felt physically better and that their pain had lessened. In the study of Efe et al. (2013), 36.1% of the participants said that CAM practices were beneficial in terms of the child's fighting the disease and maintaining/protecting his/her health. In the present study, 76.5% of the parents reported a reduction in the mass, 53.8% an improvement in the child's general condition and 15.4% expressed the observation that the child's morale had improved. These results are consistent with the results of the other studies.

### Conclusion and Recommendations

The prevalence of the use of CAM among parents with children with cancer is not negligible. It is thought that health professionals must be informed about the use of CAM and its methods and those patients should be evaluated with an impartial approach. Patients should be provided with information about the use of CAM, particularly together with conventional treatment. The potential risks of some CAM methods should be realized and patients should be queried about their use of CAM. Their conditions should be evaluated in the light of this information and appropriate counseling should be provided.

### Limitations

Responses could not be obtained from all of the parents of the children in the clinic since some did not share their views on their burden of care and burnout nor their use of CAM therapies with their doctors. Some also refused to participate in the research due to a fear of what their doctor's attitude would be if this were found out.

### Recommendations for Further Research

There is a need for more randomized studies with larger samples and control groups to further the exploration of the use of CAM and the effects of these methods on children and their parents.

### Implications for Nursing Practice

Nurses should inquire about whether or not children with cancer are receiving CAM therapies. Children and their mothers should be informed about the use of CAM and the effects of these therapies and if one of these methods is being used, it should be impressed upon mothers that this is information that should be shared with the doctor. In this context, nurses will be of help in reducing any unwanted effects that may arise from such therapies (toxicity, interaction of CAM and drugs, etc.) and in increasing the success of the treatment.

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